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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,893	12/29/2000	Robert Palifka	09991-014001	6685

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JOHN J. GAGEL
Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804

EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 02/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/749,893

Applicant(s)

PALIFKA ET AL.

Examiner

Michael P Nghiem

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2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-14, 18-26, 28-31, 36-39 and 43 is/are rejected.
- 7) ☒ Claim(s) 8-11, 15-17, 27, 32-35 and 40-42 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

- "body 4" (page 4, line 23, page 5, line 15) should be -- body 20 --.

Appropriate correction is required.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract contains less than 50 words.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claim 42, "... the width is 300 to 495 microns" is not supported by the specification.

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Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "protector strip" (claims 18, 28, 43) must be shown or the feature(s) cancelled from the claim(s). No new matter should be entered.

Claim Objections

5. Claim 20 is objected to because of the following informalities:

- "orifice strip" should be – orifice plate --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30, the ink jet printing module cannot define itself.

The remaining claims are also rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-7, 12-14, 18-26, 28-31, 36-39, and 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishima (US 6,109,737).

Kishima discloses all the claimed features of the invention including:

- An ink jet printing module and method of manufacturing same comprising:

- contacting a first component (32) of an ink jet printing module (19) having a surface with a thermoplastic bonding component (50) (Fig. 3); and
- heating the surface to bond the surface to the thermoplastic bonding component (Abstract, lines 4-6);
- comprising applying pressure to the surface and the thermoplastic bonding component (Abstract, lines 4-6);
- the surface and the thermoplastic bonding component are substantially free of liquid adhesive (since 50 has adhesive property, column 16, lines 27-29);
- contacting a second component (31) of the ink jet printing module having a surface with the thermoplastic bonding component; and
- heating the surface to bond the surface to the thermoplastic bonding component (column 17, lines 32-36);
- the first component of the ink jet printing module is a piezoelectric element (33 (of 32));
- the thermoplastic bonding component includes an electrode pattern (column 16, lines 54-59);
- the thermoplastic bonding component includes an adhesive polyimide (column 18, lines 24-27);
- the ink jet printing module includes an ink channel (42), the piezoelectric element being positioned to subject ink within the channel to jetting pressure (41), and electrical contacts (of electrodes) arranged for activation of the piezoelectric element;
- the ink jet printing module includes a series of channels (Figs. 3, 4);

- the module includes an orifice plate (30) and the method further comprises adhering a protector strip (251) over the orifice plate;
- the orifice plate includes a thermoplastic bonding material adjacent to the protector strip (column 38, lines 50-55);
- each of said channels is covered by a single piezoelectric element (Figs. 3, 4).

Allowable Subject Matter

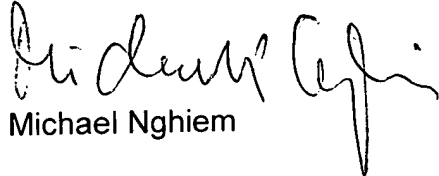
8. Claims 8-11, 15-17, 27, 32-35, and 40-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons For Allowance

9. The combination and method as claimed wherein the piezoelectric element is lead zirconium titanate (claims 8, 32) or the thermoplastic bonding component has a thickness between 1 micron and 150 microns (claims 9, 33) or the thermoplastic bonding component is placed over the ink channel and includes a filter (claims 15, 27, 40) is not disclosed, suggested, or made obvious by the prior arts of record.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. An inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 308-0956.

A handwritten signature in cursive script, appearing to read "Michael Nghiem".

Michael Nghiem

February 18, 2002